

Also with exemplary reference to Figs. 1 and 2, independent claim 9 sets forth a switch device comprising: an operating member 12 having a user-operable member 12A and a cam section 12B fixed for rotation with the user-operable member 12A about a rotary axis, the cam section 12B being provided with a protruding portion 13; a plurality of switches 20, 21 that engage the cam section 12B and output electric ON/OFF states based on the operation of the operating member 12; and a detecting section 27 connected to the plurality of switches 20, 21 for detecting a rotary position of operation of the operating member 12 about the rotary axis based on the electric ON/OFF states of the plurality of switches 20, 21.

Thus, according to the present invention as recited in each of the independent claims 1 and 9, the switches 20, 21 output electric ON/OFF states depending on the operation of the operating member, and furthermore, the detecting section 27, which is connected to the switches 20, 21, is operable to detect a position of operation of the operating member based on the electric ON/OFF states of the switches 20, 21.

In contrast to the present invention of claims 1 and 9, the Decker patent discloses an electronic rotary controller comprising an operating member (e.g. 10, 11, 25) including a toothed disc 25 (referred to by the Examiner as a "cam member") having latching teeth 24, a pair of catches 26, 27 which can be pivoted by means of actuating elements 28, 29 and which interact with the toothed disc 25 upon being activated by a user interface 16. Thus, contrary to the Examiner's assertion that the elements 26, 27 of the Decker patent constitute "switches", the elements 26, 27 of Decker actually constitute catches that can be pivoted between their release positions (shown in Fig. 2) and their engaging positions (shown in Figs. 3b and 3c for the catch 26) as controlled by the user interface 16.

That is, in the Decker arrangement, elements 28 and 29 constitute actuating elements that are provided to cause pivoting of the catches 26, 27 from their released positions (as shown in Fig. 2) to their engaged positions interacting with the toothed disc 25 (see column 3, lines 49-60). These catches 26, 27 serve to allow "the rotary movement of the rotating knob 10 to be influenced in various ways in order to limit the rotation range of the rotating knob 10 selectively,

to make it possible to sense latching positions and to mark specific positions in a selection range such that they can be sensed by touch" (see column 3, lines 15-21).

Therefore, the catches 26, 27 clearly do not constitute switches that engage the cam member and output electric ON/OFF states based on the operation of the operating member, as required by claims 1 and 9. Instead, in the Decker arrangement, it is the sensor device 14 (not the latching and locking device 15 including the toothed disc 25 and catches 26, 27) that detects the rotation direction and/or rotation position of the rotating knob 10 (see column 3, lines 12-15).

At column 3, lines 62-64 of the Decker patent, it is stated that the latching teeth 24 may be designed as pulse initiators for the sensor device 14, for example, by constituting light-interrupting barriers. However, this clearly does not envision use of the catches 26, 27 as switches that output electric ON/OFF states based on the operation of the operating member. Similarly, it is envisioned in the Decker patent that the catches 26, 27 can be used "to detect a rotary movement of the rotating knob 10, by these catches 26, 27 supplying an appropriate signal to the user interface 16, for example for each latching click, by means of a switch or the like." This envisioned arrangement is similar to the light-interrupting arrangement in that it would sense signals to the user interface 16 for each latching click. This would allow counting of the number of clicks to determine how far the knob has rotated, which is similar to the prior art arrangement shown in Figs. 8 and 9A-9C of the present application and described in the "Background Art" section of the present specification (see paragraphs [0007] - paragraph [0010] of the substitute specification filed January 5, 2005). Thus, these descriptions of alternative arrangements of the Decker patent clearly do not disclose or suggest the use of plural switches that engage a cam member and output electric ON/OFF states based on the operation of the operating member, and a detecting section connected to the switches for detecting a position of operation of the operating member based on the electric ON/OFF states of the switches, as required by claims 1 and 9.

The Examiner cited the Moller et al. patent for teaching "a switch having a knob 2a having a cam member 1 on an inner surface for operating the cam." However, this teaching of

Moller clearly would not have obviated the above-discussed shortcomings of the Decker et al. patent.

Thus, because of the above-discussed clear differences between the present invention of claims 1 and 9 and the Decker et al. patent, it is believed apparent that claims 1 and 9 are not anticipated by the Decker et al. patent. Furthermore, the differences are such that a person having ordinary skill in the art would clearly not have been motivated to modify the Decker et al. arrangement or to make any combination of the references of record in such a manner as to result in or otherwise render obvious the present invention of claims 1 and 9. Therefore, it is respectfully submitted that claims 1 and 9, as well as the claims depending therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this remarks, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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